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| APPLICATION NO.           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/670,598                | 09/26/2003  | Ulrich R. Bernier    | 0184.03             | 9892             |
| 25295                     | 7590        | 04/15/2009           | EXAMINER            |                  |
| USDA, ARS, OTT            |             |                      | CHOI, FRANK I       |                  |
| 5601 SUNNYSIDE AVE        |             |                      |                     |                  |
| RM 4-1159                 |             |                      | ART UNIT            | PAPER NUMBER     |
| BELTSVILLE, MD 20705-5131 |             |                      | 1616                |                  |
|                           |             |                      |                     |                  |
|                           |             |                      | MAIL DATE           | DELIVERY MODE    |
|                           |             |                      | 04/15/2009          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/670,598             | BERNIER ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | FRANK I. CHOI          | 1616                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 February 2009.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 43-49 and 51-55 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 45-47, 49 and 52-55 is/are rejected.

7) Claim(s) 43, 44, 48, 51 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: The amendment (2/23/2009) directs that the first line of the Specification be deleted, however, the referenced subject matter is not the first line of the Specification as the Specification was amended on 11/30/2007 to include a new first line. There is no direction with respect to the subject matter on Page 8 of the Amendment. Since the first sentence on page 8 and the second sentence on page 8 are different paragraphs, any amendment should not include the first sentence other than clearly indicating the same as a reference point to the subject matter to be deleted (having the first sentence present with no explanation confuses the record). Appropriate correction is required.

Claims 43-49, 51-55 are objected to because of the following informalities: “albinmanus” should be “albimanus”. Appropriate correction is required.

### ***Double Patenting***

The terminal disclaimer filed on 2/23/2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,800,279 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45,52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Paganessi et al. (US Pat. 5,943,815).

Smith et al. teaches that the combination of lactic acid and carbon dioxide is an effective A. aegypti mosquito attractant (Pg. 766, 767).

Paganessi et al. (US Pat. 5,943,815) teach that the combination of acetone with carbon dioxide is an effective attractant for mosquitoes (Column 2, lines 53-68, Column 3, lines 1-25).

Smith et al. discloses that the combination of lactic acid and carbon dioxide is an effective mosquito attractant. The difference between Smith et al. and the claimed invention is that Smith et al. does not expressly disclose compositions and methods of attracting mosquitoes consisting of lactic acid, acetone and carbon dioxide. However, the prior art amply suggests the same as Paganessi et al. discloses that the combination of acetone with carbon dioxide is an effective attractant for mosquitoes. As such it would have been well within the skill of and one ordinary skill in the art would have been motivated to combine lactic acid, acetone and carbon dioxide with the expectation that the same would be effective in attracting mosquitoes.

The Examiner has duly considered the Applicant's arguments but deems them unpersuasive.

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, held the following:

(1) the obviousness analysis need not seek out precise teachings directed to the subject matter of the challenged claim and can take into account the inferences and creative steps that one of ordinary skill in the art would employ;

(2) the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents;

(3) it is error to look only the problem the patentee was trying to solve-any need or problem known in the field of endeavor at the time of invention and addressed by the prior art can provide a reason for combining the elements in the manner claimed;

(4) it is error to assume that one of ordinary skill in the art in attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem- common sense teaches that familiar items may have obvious uses beyond their primary purposes, and in many cases one of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle (one of ordinary skill in the art is not automaton);

(5) it is error to assume that a patent claim cannot be proved obvious merely by showing that the combination of elements was “obvious to try”. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396, 1397 (U.S. 2007).

Contrary to the Applicant’s arguments, “obvious to try” is not excluded as a basis for obviousness. Further, there is no requirement the prior art must set forth a motivation to modify or combine the references. In any case, “It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents

were held to be *prima facie* obvious.). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held *prima facie* obvious). Since as indicated the compositions are each taught to be effective for attracting mosquitoes, it would have been obvious to combine the same with the expectation that the combination would be effective in attracting mosquitoes.

The scope of enablement rejection applied to prior broad claims, claiming mosquitos in general. Since the claims are limited to those species which were enabled, the argument with respect to undue experimentation is not applicable herein. Further, Smith et al. specifically discloses that the combination of lactic acid and carbon dioxide is effective for attracting *Aedes aegypti*. Since Paganessi et al. discloses that the combination of carbon dioxide and acetone is an effective attractant for mosquitoes. As such, one of ordinary skill in the art would have expected that adding acetone to the combination of lactic acid and carbon dioxide would also be attractive to *Aedes aegypti*.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 46, 47,53,54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Wilson et al. (US Pat. 4,818,516).

Smith et al. teaches that lactic acid and the combination of lactic acid and carbon dioxide are effective *Aedes aegypti* mosquito attractants (Pg. 766).

Wilson et al. teaches that dimethyl disulfide is effective in attracting mosquitoes (Column 8, lines 44-60).

Smith et al. teaches that lactic acid and the combination of lactic acid and carbon dioxide are effective mosquito attractants. The difference between Smith et al. and the claimed invention is that Smith et al. does not expressly disclose compositions or methods for attracting mosquitoes consisting of lactic acid and dimethyl disulfide or lactic acid, dimethyl disulfide and carbon dioxide. However, the prior art amply suggests the same. Wilson et al. discloses that dimethyl disulfide is known to be an attractant for mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination lactic acid and dimethyl disulfide and the combination of lactic acid, dimethyl disulfide and carbon dioxide would be effective in attracting mosquitoes. See *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

The Examiner has duly considered the Applicant's arguments but deems them unpersuasive for the reasons above and the further reasons below .

The scope of enablement rejection applied to prior broad claims, claiming mosquitos in general. Since the claims are limited to those species which were enabled, the argument with

respect to undue experimentation is not applicable herein. Further, Smith et al. specifically discloses that the combination of lactic acid and carbon dioxide is effective for attracting *Aedes aegypti*. Since Wilson et al. discloses that dimethyl disulfide is an effective attractant for mosquitoes. As such, one of ordinary skill in the art would have expected that adding dimethyl disulfide to the combination of lactic acid and carbon dioxide would also be attractive to *Aedes aegypti*.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 49,55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Carlson et al. (Yellowfever Mosquitoes:Compounds Related to Lactic Acid that Attract Females).

Smith et al. teaches that lactic acid and that the combination of lactic acid and carbon dioxide is an effective *Aedes aegypti* mosquito attractant (Pg. 766).

Carlson et al. teaches that lactic acid is an effective *Aedes aegypti* mosquito attractant and that glycolic acid in combination with carbon dioxide is an effective *Aedes aegypti* mosquito attractant (Pg. 330, Table 1, pg. 331).

Smith et al. teaches that lactic acid and the combination of lactic acid and carbon dioxide are effective mosquito attractants. The difference between Smith et al. and the claimed invention is that Smith et al. does not expressly disclose compositions and methods consisting of glycolic acid, carbon dioxide and lactic acid.. However, the prior art amply suggests the same Carlson et al. disclose that lactic acid and glycolic acid and carbon dioxide are known in the art to attract

mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination of glycolic acid, carbon dioxide and lactic acid would be effective in attracting mosquitoes. See *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

The Examiner has duly considered the Applicant's arguments but deems them unpersuasive for the same reasons as above and the further reasons below.

The scope of enablement rejection applied to prior broad claims, claiming mosquitos in general. Since the claims are limited to those species which were enabled, the argument with respect to undue experimentation is not applicable herein. Further, Smith et al. specifically discloses that the combination of lactic acid and carbon dioxide is effective for attracting *Aedes aegypti*. Since Carlson et al. discloses that lactic acid and glycolic acid and carbon dioxide are an effective attractant for *Aedes aegypti* mosquitoes. As such, one of ordinary skill in the art would have expected that adding glycolic acid to the combination of lactic acid and carbon dioxide would also be attractive to *Aedes aegypti*.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is 571-273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a compressed schedule and may be reached Monday, Tuesday, Wednesday and Thursday, 6:00 am – 4:30 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Johann R. Richter, can be reached at (571)272-0646. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank Choi  
Patent Examiner  
Technology Center 1600  
April 15, 2009

/Johann R. Richter/  
Supervisory Patent Examiner, Art Unit 1616